

REMARKS

This Response is offered in reply to the office action of February 14, 2007.

In paragraph 1 of the office action, claims 24, 26, and 27 are rejected under 35 USC 103(a) as obvious in view of US patent 5,961,126 taken with US Patent 5 427,389.

Applicants have amended claim 24 to recite a cylinder head gasket having, among other features, several combustion chamber openings wherein each of the combustion chamber openings has at least one first bead associated therewith and being surrounded by said at least one first bead formed in a sheet metal layer of the gasket plate and further having at least one second bead; namely, a so-called stopper bead, for delimiting the elastic deformation of the associated first bead.

The Examiner's arguments in support of the Section 103 rejection are believed to be in error. In essence, the Examiner argues that in the cylinder head gasket of the '126 patent, the beads A12a surrounding the combustion chamber openings form stoppers for the peripheral bead A16. Applicants believe the examiner's characterization of the beads A12a as stoppers is patently incorrect and not supported by the disclosure of the '126 patent.

In particular, when a cylinder head gasket is mounted and clamped between a cylinder head and an engine block, the pressing forces acting on the cylinder head gasket are produced by the cylinder screws which extend through the bolt holes H<sub>b</sub> shown in Figure 1 of US '126. Further, a cylinder head cannot be considered as an absolutely stiff and rigid component; due to this fact, the pressing forces created by the cylinder head

screws are highest at the locations of the cylinder head screws; i.e., the bolt holes Hb, and decrease with increasing distance (in a plan view of the gasket) from the bolt holes He. In the gasket of the '126 patent, the bolt holes Hb are positioned between the peripheral bead A16 and the beads A12a. For this reason, one skilled in the art of cylinder head gaskets would never consider that the beads A12a could serve as stoppers for the peripheral bead A16 which, particularly along the upper longitudinal edge of the gasket shown in Figure 1, is positioned remote from the beads A12a and with the bolt holes Hb between the peripheral bead A16 and the beads A12a.

Further, a review of Figures 2 and 3 of the '126 patent indicates that when the gasket is pressed, the beads A12a cannot prevent that the peripheral bead A16 is completely flattened. The beads A12a cannot be considered to be a stopper, which has to prevent that an associated bead can be completely flattened.

Contrary to the examiner's argument, the '126 patent itself expressly discloses that the beads A12a are sealing beads disposed around the combustion chamber bore Hc and compressed to seal around the cylinder bore when the gasket is placed between the cylinder head and the cylinder block and the cylinder head screws are tightened. For example, the examiner is referred to column 3, lines 40-41 and lines 54-58 of the '126 patent.

The examiner will appreciate that the gasket of the '126 patent does not provide stoppers for these combustion chamber opening beads A12a, and the peripheral beads A15 and A16 are unable to protect the first combustion chamber opening beads A12a against excessive flattening because the peripheral beads A15, A16 do not surround each single one of the combustion chamber openings.

Applicants do not believe that one skilled in the art of cylinder head gaskets has any reason for combining the '126 patent and the '389 patent in the manner argued by the Examiner, because the meandering beads shown in Figures 5 and 6 of the '389 patent serve exclusively the purpose of supporting part of the tightening pressure (applied by the cylinder head screws) in the zones close to the narrow edges of the cylinder head gasket where the cylinder head has the tendency to be drawn (by the cylinder head screws) closest to the engine block.

The only reasonable combination of the cited reference patents that is suggested by the cited patents themselves would occur in such manner that the peripheral bead A16 of the gasket of the '126 patent has meandering sections in the neighborhood of the two narrow edges of the gasket shown in Figure 1 of the '389 patent in order to make the bead A16 more stiff in said narrow edge zones. However, this combination of the cited patents does not yield Applicants' claim 24.

Applicants believe that the '126 patent and the '389 patent alone and combined together fail to disclose or suggest the cylinder head gasket recited in Applicants' claims 24, 26, and 27.

Applicants respectfully request entry of this amendment and allowance of pending claims 24, 26, and 27.

Respectfully submitted,



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CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service under 37 CFR 1.8 as first class mail in an envelope addressed to: Commissioner For Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on April 13, 2007.



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